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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/143,967
Filing Date: August 31, 1998
Appellant(s): BERTMAN ET AL.

Robert A. Voigt, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/26/04.

(1) ***Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

(2)   ***Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or

be directly affected by or have a bearing on the decision in the pending appeal is contained in the

brief.

(3)   ***Status of Claims***

The statement of the status of the claims contained in the brief is correct.

(4)   ***Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5)   ***Summary of Invention***

The summary of invention contained in the brief is correct.

(6)   ***Issues***

The appellant's statement of the issues in the brief is correct.

(7)   ***Grouping of Claims***

Appellant's brief includes a statement that claims 38, 39, 50, 51, 62, 63, and 73-79 stand

or fall together as three separate groups, and provides reasons as set forth in 37 CFR 1.192(c)(7)

and (c)(8).

(8)   ***Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9)   ***Prior Art of Record***

5,666,502   Capps   9/1997

5,901,246   Hoffberg et al   5/1999

5,805,911   Miller   9/1998

(10)   Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims (copy of final

Office action):

Claims 38, 39, 50, 51, 62, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US patent #5,666,502 (Capps) in view of US patent #5,901,246 (Hoffberg et al).

-    As per claims 38, 39, 50, 51, 62, 63: Capps teaches a handheld computer system

     comprising a housing, a processor mounted within the housing for processing digital

     data, a memory for storing digital data, a display, an input digitizer, a control program

     stored in the memory for processing of digital data (figures 1, 2; col. 4, line 39 – col.

     5, line 52). The system displays a form defining data fields (figure 5a) and exercises

     a predictive widget (9:65 – 10:32; 11:32 – 12:24) to supply a list of predicted data

     entries for a defined data field 184 with the top item in the list being the highest

     ranked data entry to be selected (figures 5b). Capps fails to teach that the defined

     data field is filled with the predictive default entry. It is noted that a Capps' user must

     select the desired entry (most desirable top-most entry) from the list to fill-in the data

     field. However in the same field of data entry, implementation of default entry from a

     predicted list of options is disclosed by Hoffberg et al (See 51:62-66; 77:55-63;

     81:10-21). It would have been obvious to one of skill in the art, at the time the

     invention was made, to combine the Hoffberg's implementation of default entry from

     a predicted list of options to Capps for automatically fill in the data field with the

option that is predicted as the most probably desired option by the user. Motivation

of the combining is for the improvement wherein acceptable choice can be

immediately or quickly presented to the user as suggested by Hoffberg et al (77:60-

63). In light of the combining, the system stores a predictive list of entries (Capps'

11:21-31; figures 6A,B) and automatically selects a default entry from the list based

on a predetermined algorithm.

Claims 73-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent

#5,666,502 (Capps) in view of US patent #5,901,246 (Hoffberg et al), further in view of US

patent #5,805,911 (Miller)

- As for claim 73: Capps teaches a handheld computer system comprising a housing, a

processor mounted within the housing for processing digital data, a memory for

storing digital data, a display, an input digitizer, a control program stored in the

memory for processing of digital data (figures 1, 2; col. 4, line 39 – col. 5, line 52),

circuitries for displaying a form defining data fields (figure 5a) and exercises a

predictive widget (9:65 – 10:32; 11:32 – 12:24) to supply a list of predicted data

entries for a defined data field 184, wherein the top item in the list being the highest

ranked data entry to be selected (figures 5b). Capps fails to teach that the defined

data field is filled with the predictive default entry. It is noted that a Capps' user must

select the desired entry (most desirable top-most entry) from the list to fill-in the data

field. However in the same field of data entry, implementation of default entry from a

predicted list of options is disclosed by Hoffberg et al (See 51:62-66; 77:55-63;

81:10-21). It would have been obvious to one of skill in the art, at the time the invention was made, to combine the Hoffberg's implementation of default entry from a predicted list of options to Capps for automatically fill in the data field with the option that is predicted as the most probably desired option by the user. Motivation of the combining is for the improvement wherein acceptable choice can be immediately or quickly presented to the user as suggested by Hoffberg et al (77:60-63). In light of the combining, the system stores a predictive list of entries (Capps' 11:21-31; figures 6A,B) and automatically selects a default entry from the list based on a predetermined algorithm.

The combined teachings fail to clearly teach the circuitry operable for predictive filling an entry in the form after the user enter one or more character in the entry field. However in the same field of providing data entry into a data field using predictive modules, Miller discloses the prediction of data entries into data fields after user has input the first few characters (1:33-41; 9:25-43. See also Capps' Background of Invention). Miller suggested that a predicted data entry can be displayed to the user for selection or can be automatically selected by default for entry into a data field (9:42-45; 12:49-61). Thus it would have been obvious to one of skill in the art, at the time the invention was made, to combine Miller's teaching of predicting the user desirable option after user input characters to a data field to the combination of Capps & Hoffberg for the advantage of having the capability to predict user desirable option from the first few characters input by the user. Such modification would supplement Capps&Hoffberg predicted list of options, for

example in the case the list does not contain option desired by the user. The modification would provide a supplement for predicting the desirable option from user input characters.

- As for claims 74, 75: An entry is selected based on weight determination of frequency and/or recency of use (11:32 12:23; figures 5, 6).

- As for claim 76: The predictive filling an entry in the form after the user enters one or more characters in the form is based on a combination of frequency and recency of data entries previously entered by the user in one or more entries in the form (Miller's 9:26-67, 11:1-27, figure 4; Capps' figures 5, 6).

- As for claim 77: The system includes circuitries for presenting the list of predicted entries to the user (Capps' figure 5; Miller's 12:58-61). The list comprises data entries previously entered by the user in one or more entries in the form (Miller's 9:26-67, 11:1-27, figure 4; Capps' figures 5, 6).

- As for claims 78, 79: The list is organized by one of a recency and/or frequency of data entries previously entered in said form (Miller's 9:26-67, 11:1-27, figure 4; Capps' 12: 4-23, figures 5, 6).

Claims 46, 58, and 70 are allowed as set forth in the previous Office action.

Claims 45, 57 and 69 are also allowable in view of the applicant's argument that Miller and Capps do not teach selecting a data entry from the predictive list based upon a user selected weight determination of the recency and frequency of use of listed data entries.

(11)   ***Response to Argument***

The Capps reference: Capps teaches a data input technique that provides the user with a list of predicted menu items for data entry based on frequency and recency of usage. Item that is predicted as most probably desirable by the user appears at the topmost of the list. User may selected an item from the list for filling a blank data field. The method help to ease data entry from type-in by merely selecting the item from the list. See the abstract and explanation of figure 5B.

The Hoffberg et al reference: Hoffberg et al teach a method for predicting a user desirable menu item from a list of options for automatically fill-in a data field as a default entry (51:62-66; 77:55-63; 81:10-21). Thus data entry is even faster in Hoffberg since the user does not have to manually select the item from the list.

The appellants acknowledge that Hoffberg's data entry technique reduces the time necessary to communicate a desired action through an interface to a computerized device, however argue that the motivation to combine is not suggested from the primary reference but from Hoffberg, which is a secondary reference. In response to the argument, it has been held that the test for combining references is not what the individual references themselves suggest but rather what <u>the combination of the disclosures taken as a whole</u> would suggest to one of ordinary skill in the art (In re McLaughlin, 170 USPQ 209 (CCPA 1971)). Obviousness is determined <u>in view of the sum of all the relevant teachings in the art, not in view of the first one and then another of the isolated teaching in the art</u> (In re Kuderna, 165 USPQ 575 (CCPA 1970)).

The appellants further argue that the combination of Capps and Hoffberg fail to establish a prima facie case of obviousness because Capps has no suggestion of using intelligent pattern recognition for providing the user with high probability choices. In response to the argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Even if the appellants is implying that the references are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references direct to the particular problem of menu selection, by providing the user with a predicted list of most desirable options for data entry (Capps), and automatically enter the most desired option into the data field as an alternative to providing the list (Hoffberg). One of skill in the art, having both Capps and Hoffberg teachings of speeding-up data entry in front of him, would be motivated to combine the teaching of default entry suggested by Hoffberg to Capps to further increase the Capps' data entry speed by short-cutting Capps' user from selecting the entry from the predicted list. Capps, as combined with Hoffberg, would automatically provide an entry into the blank 184 of figure 5B, without manually picking from the list 200 by the user. It would be readily apparent to one of skill in the art that Capps, as modified, clearly

enhances Capps' data entry by speeding up the entering of menu option by reducing the manual

picking step and saving processing resource from the displaying of the historical list.

In response to applicant's argument that the combination of Capps and Hoffberg fail to

establish a prima facie case of obviousness because Capps does not suggest the supplying of a

predictive default entry. In response to the argument, if Capps does teach the supplying of a

predictive default entry then there will be no obviousness issue since it appears that Capps would

be qualified as a 102 reference. As set forth above, obviousness is drawn from the combination

teachings in both references taken as a whole, not from each an individual teaching. In this case,

Hoffberg suggests the implementation of predictive default entry as an alternative to the

displaying a predicted list of entry (77:55-67). One of skill in the art, having both Capps and

Hoffberg teachings of speeding-up data entry in front of him, would be motivated to combine the

teaching of default entry suggested by Hoffberg to Capps to further increase the data entry speed

by short-cutting Capps' user from selecting the entry from the predicted list. It would be readily

apparent to one of skill in the art that Capps, as modified, clearly enhances data entry by

speeding up the entering of menu option by reducing the manual picking step and saving

processing resource from the displaying of the historical list.

The appellants further argue that the combination would change Capps principle of

operation, i.e., Capps would become a VCR or medical device, etc... In response to applicant's

argument, the test for obviousness is not whether the features of a secondary reference may be

bodily incorporated into the structure of the primary reference; nor is it that the claimed

invention must be expressly suggested in any one or all of the references. Rather, the test is what

the combined teachings of the references would have suggested to those of ordinary skill in the

art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Further, since Hoffberg's

teaching of predictive default entry could be implemented in VCR and medical device without

changing the VCR into the medical device, it would appear that the teaching could be

implemented into Capps's computer without changing the computer into a VCR or medical

device. It is not the hardware components of Hoffberg's VCR or the medical device being

combined to Capps, but the teaching of predictive default entry in Hoffberg. One of skill in the

art would be motivated to combine the teaching of predictive default entry suggested by

Hoffberg to Capps to further increase the Capps' data entry speed by short-cutting Capps' user

from selecting the entry from the predicted list. Capps, as combined with Hoffberg, would

automatically provide an entry into the blank 184 of figure 5B, without manually picking from

the list 200 by the user.

In response to the argument that the combination of Capps and Hoffberg fail to provide a

reasonable expectation of success, it would be readily apparent to one of skill in the art that

Capps, as modified, clearly enhances Capps' data entry by speeding up the entering of menu

option. Most user desirable choice is immediately and quickly entered into the data field, thus

reducing the manual picking step and saving processing resource from the displaying of the

historical list.

The appellants further argue that Hoffberg does not teach the limitation "exercising a

predictive widget to supply a predictive default entry for the defined data field", asserting that

Hoffberg only presents a most probable choice for user approval. In response to the argument,

the phrase "most probable choice" itself already carries the meaning of a prediction for the

choice. Furthermore, Hoffberg clearly discloses a predictive widget, using predictive technology

such as Boolean logic, fuzzy logic, neural network, or other type of artificial intelligent, to

present a most probable choice to the user (51:62-66; 77:55-59). The choice is automatically

fills in the blank by default (81:14-17). Thus the most probable choice is a choice that is

predicted by a predictive widget, not just a most frequently used choice as argued by the

appellants. The choice is automatically selected from Hoffberg's stored predicted list

(Hoffberg's, 77:55-67), or from Capps' list 200 as in light of the combining. The predicted

choice is automatically entered into the blank data field prior to the user entering any character in

the data field.

As for claims 73-79, the appellants appear to repeat the argument that motivation to

combine must come from each of the individual reference. As fully set forth above in the

response, the test for combining references is not what the individual references themselves

suggest but rather what <u>the combination of the disclosures taken as a whole</u> would suggest to one

of ordinary skill in the art (In re McLaughlin, 170 USPQ 209 (CCPA 1971)). Obviousness is

determined <u>in view of the sum of all the relevant teachings in the art, not in view of the first one</u>

<u>and then another of the isolated teaching in the art</u> (In re Kuderna, 165 USPQ 575 (CCPA

1970)). It is recognized that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching,

suggestion, or motivation to do so found either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

It is further recognized that any judgment on obviousness is in a sense necessarily a

reconstruction based upon hindsight reasoning. But so long as it takes into account only

knowledge which was within the level of ordinary skill at the time the claimed invention was

made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In this case, all references direct to the particular problem of menu selection, by providing the

user with a predicted list of most desirable options for data entry (Capps), automatically enter the

most desired option into the data field as an alternative to providing the list (Hoffberg), an auto

completion of data entry by prediction (Miller). Miller teaches an improvement over default

entry of choice by auto-completion, i.e., predicting an entry after the user had type-in some first

few characters (1:33-41; 9:25-45; 12:49-61). One of skill in the art would be motivated to

combine the teaching of default entry suggested by Hoffberg to Capps to further increase the

Capps' data entry speed by short-cutting Capps' user from selecting the entry from the predicted

list. Capps, as combined with Hoffberg, would automatically provide an entry into the blank 184

of figure 5B, without manually picking from the list 200 by the user. It would also have been

obvious to one of skill in the art to further combine Miller's teaching of predicting the user

desirable option after user input characters to a data field to the combination of Capps &

Hoffberg for the advantage of having the capability to predict user desirable option from the first

few characters input by the user. Such modification would supplement Capps&Hoffberg

predicted list of options, for example in the case the list does not contain option desired by the

user. The modification would provide a supplement for predicting the desirable option from user

input characters.

In response to the argument that neither one of the references teach predicting default

entry in a form, entry to the form is disclosed by Capps in figure 5B, by Hoffberg (81:15-17, "fill

in the blank"), and in Miller figure 4. Further, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references. See *In re*

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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October 18, 2004
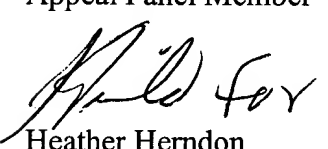
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